

Amendment and Response

Applicant: John Greeven et al.

Serial No.: 09/823,188

Filed: March 29, 2001

Docket No.: 10004662-1 (H301.419.101)

Title: METHOD AND APPARATUS FOR DELIVERING AND REFILLING PHARMACEUTICALS

IN THE CLAIMS

Please amend claims 22, 32, 53, and 65 as follows:

1-21. (Canceled)

22. (Currently Amended) A patient's intelligent drug dispensing appliance comprising:

a controller configured to store a treatment regimen for a prescription;

a reservoir configured to contain a the prescription including a plurality of individual unit doses of an unpackaged pharmaceutical tablets specific to an individual patient ~~and to be dispensed over time to the individual patient, the unpackaged pharmaceutical including individual tablets to be administered directly to the individual patient as individual unit doses according to a treatment regimen;~~

a drug delivery mechanism, ~~coupled to;~~ and responsive to the controller and coupled to and responsive to the reservoir, the drug delivery mechanism configured to controllably dispense the unpackaged pharmaceutical tablets directly from the reservoir to the individual patient ~~in a precise amount corresponding to the~~ unpackaged individual unit doses over time according to the treatment regimen of the prescription in response to signals from the controller; and

a data network interface coupled to the controller and configured to send ,and to receive, a data message regarding the unpackaged pharmaceutical over a data network through the data network interface to and from, respectively, at least one of a health care service provider and a pharmaceutical supplier wherein the data message from the patient's intelligent drug dispensing appliance identifies the patient for whom the unpackaged pharmaceutical is required and the identity of the unpackaged pharmaceutical;

wherein the patient's intelligent drug dispensing appliance is sized and shaped, based on the reservoir being sized to hold the individual doses of the unpackaged pharmaceutical tablets for the treatment regimen, for placement proximate to the individual patient remote from a health care facility.

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23. (Canceled).

24. (Canceled)

25. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 22 further including a human/display interface.

26. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 22 wherein the data network interface is capable of sending a data message to effect payment for the provision of health care service.

27. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 22 wherein the data network interface is capable of sending a data message to effect payment for the provision of a pharmaceutical.

28. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 22 wherein the data network interface is capable of sending a data message transported via the Internet.

29. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 22 where the data network interface is capable of sending a data message transported via a wireless communication device.

30. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 22 further including a pharmaceutical level detector in communication with the controller and the reservoir, the pharmaceutical level detector configured to ascertain a measured amount of the unpackaged pharmaceutical remaining in the reservoir.

31. (Canceled)

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32. (Currently Amended) An intelligent drug dispensing system providing replenishment of pharmaceutical medication, the system comprising:

a single patient intelligent drug dispensing appliance; including:

a data network interface through which pharmaceutical replenishment request signals can be received;

a controller; and

a reservoir configured to contain a plurality of individual unit doses of unpackaged pharmaceutical tablets and configured to dispense each the individual doses directly to an individual patient, ~~the unpackaged pharmaceutical including individual tablets, to be administered directly to the patient as individual unit doses~~ over time according to a treatment regiment,

wherein the single patient intelligent drug dispensing appliance is sized and shaped, based on the reservoir being sized to hold the individual doses of the unpackaged pharmaceutical tablets for the treatment regimen, for placement proximate to the patient at a non-health care facility location; and

a pharmaceutical replenishment request data server in communication with the data network interface to send medication replenishment request signals to the single patient intelligent drug dispensing appliance.

33. (Previously Presented) The intelligent drug dispensing system of claim 32 wherein the pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages from a patient of the health care service provider to generate drug refill orders.

34. (Previously Presented) The intelligent drug dispensing system of claim 32 wherein the pharmaceutical replenishment request data server is comprised of a drug supplier computer, responsive to data messages from either a patient or a health care service provider so as to effect shipment of medication to the patient.

35. (Previously Presented) The intelligent drug dispensing system of claim 32 wherein the pharmaceutical replenishment request data server is comprised of a insurance provider

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computer, responsive to data messages from either a patient or a health care service provider so as to approve payment for the medication.

36. (Previously Presented) An intelligent drug dispensing system providing automatic replenishment of pharmaceuticals, the system comprising:

a pharmaceutical replenishment request data server operatively coupled to a data network and configured to receive pharmaceutical replenishment request messages from at least one single patient intelligent drug dispensing appliance via the data network, and to cause replenishment of pharmaceuticals to the at least one single patient intelligent drug dispensing appliance;

wherein the pharmaceutical replenishment request message is configured to replenish an unpackaged pharmaceutical in the at least one single patient intelligent drug dispensing appliance, the appliance including a controller and a reservoir configured to hold a plurality of individual doses of the unpackaged pharmaceutical and configured to dispense the doses over time from the reservoir directly to an individual patient in a plurality of discrete individual unit doses according to a treatment regimen for direct use by the patient, wherein the at least one single patient intelligent drug dispensing apparatus is sized and shaped for placement proximate to the patient at a non-health care facility location.

37. (Previously Presented) The intelligent drug dispensing system of claim 36 wherein the pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages sent, via the at least one single patient intelligent drug dispensing appliance, from a patient of the health care service provider to generate drug refill orders.

38. (Previously Presented) The intelligent drug dispensing system of claim 36 wherein the pharmaceutical replenishment request data server is comprised of a pharmaceutical provider computer, responsive to data messages, via the at least one single patient intelligent drug dispensing appliance, sent from a health care service provider to generate drug refill orders.

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39. (Previously Presented) The intelligent drug dispensing system of claim 36 wherein the pharmaceutical replenishment request data server is comprised of a insurance carrier computer, responsive to data messages sent from a health care service provider to enable at least one of generating drug refill orders for a patient at the at least one single patient intelligent drug dispensing appliance and approving payment for the pharmaceutical.

40-49. (Canceled)

50. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 65 wherein the controller includes a memory device contained within the appliance.

51. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 50 wherein the memory device contains the treatment regimen regulating dispensing of the individual unit doses of the unpackaged pharmaceutical to the individual patient.

52. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 51 wherein the data network interface is adapted to be removably coupled to at least one patient monitoring sensor.

53. (Currently Amended) A patient's intelligent drug dispensing appliance comprising:
a controller;
a reservoir configured to contain a supply of unpackaged pharmaceutical specific to the individual patient to be dispensed over time according to a prescription treatment regimen, the supply including a grouped plurality of individual unit doses of tablets;
a drug dispensing mechanism coupled to, and responsive to, the controller and coupled to and responsive to the reservoir, the drug dispensing mechanism configured to dispense the tablets of unpackaged pharmaceutical directly to the individual patient from the reservoir in a precise amount of the individual unit doses over time according to the prescription treatment regimen in response to signals from the controller;
a data network interface coupled to the controller; and

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a pharmaceutical depletion guard, the pharmaceutical depletion guard including a pharmaceutical level detector coupled to the controller and the data network interface, the data network interface is capable of sending a message to at least one of a health care provider and a pharmaceutical supplier, the data message from the data network interface including a value of a measured amount of the tablets of unpackaged pharmaceutical in the reservoir,

wherein the intelligent drug dispensing appliance is sized and shaped, based on the reservoir being sized to hold the individual doses of unpackaged pharmaceutical tablets of the prescription treatment regimen, for placement proximate to the individual patient remote from a hospital location.

54. (Previously Presented) The intelligent drug dispensing appliance of claim 53 wherein the reservoir is configured to also contain the unpackaged pharmaceutical as at least one of a liquid and a gas.

55. (Previously Presented) The intelligent drug dispensing appliance of claim 54 further including a human/display interface, the human/display interface including at least one of a tactile input device or a speech recognition device operatively coupled to the controller.

56. (Previously Presented) The intelligent drug dispensing appliance of claim 55 further including at least one sensor operatively coupled to the controller, the sensor capable of providing data signals indicative of the patient's physical condition.

57. (Previously Presented) The intelligent drug dispensing system of claim 32 wherein the single patient intelligent drug dispensing appliance further comprises:

a pharmaceutical depletion guard, the pharmaceutical depletion guard including a pharmaceutical level detector coupled to the controller and the data network interface, wherein the data network interface is capable of sending a message to at least one of a health care provider and pharmaceutical supplier, the data message from the data network interface including at least one of a patient identity, a pharmaceutical identity, and a treatment regimen.

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58. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 53 wherein the data network interface is capable of sending a data message to effect payment for a service, the service including at least one of the provision of health care and the provision of a pharmaceutical.

59. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 30 wherein the pharmaceutical level detector is configured to ascertain a decremented amount of the unpackaged pharmaceutical remaining in the reservoir.

60. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 30 wherein the pharmaceutical level detector is configured to ascertain a depth measurement of the unpackaged pharmaceutical in the reservoir.

61. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 30 wherein the pharmaceutical level detector is configured to ascertain a static pressure within the reservoir.

62. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 53 wherein the pharmaceutical level detector is configured to ascertain a decremented amount of the unpackaged pharmaceutical remaining in the reservoir.

63. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 53 wherein the pharmaceutical level detector is configured to ascertain a depth measurement of the unpackaged pharmaceutical in the reservoir.

64. (Previously Presented) The patient's intelligent drug dispensing appliance of claim 53 wherein the pharmaceutical level detector is configured to ascertain a static pressure within the reservoir.

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65. (Previously Presented) An intelligent direct-to-patient drug dispensing appliance comprising:

a controller;

a reservoir configured to contain a plurality of individual ~~unit~~ doses of an unpackaged liquid pharmaceutical specific to an individual patient ~~and to be dispensed over time to the individual patient, the unpackaged liquid pharmaceutical to be administered to the individual patient as individual unit doses for direct use by the individual patient according to a treatment regimen;~~

a drug delivery mechanism, coupled to, and responsive to the controller and coupled to and responsive to the reservoir, the drug delivery mechanism configured to controllably dispense the unpackaged liquid pharmaceutical directly from the reservoir, via an ink-jet print mechanism, as a mist for inhalation by ~~to~~ the individual patient in a precise amount corresponding to the individual ~~unit~~ doses over time according to a prescription treatment regimen in response to signals from the controller; and

a data network interface coupled to the controller,

wherein the appliance is sized and shaped, based on the reservoir being sized to hold the individual doses of the unpackaged liquid pharmaceutical of the prescription treatment regimen, for placement proximate to a patient remote from a health care facility.

66. (Previously Presented) The appliance of claim 65 wherein the data network interface is configured to send, and to receive, a data message regarding the pharmaceutical over a data network through the data network interface to and from, respectively, at least one of a health care service provider and a pharmaceutical supplier wherein the data message from the patient's intelligent drug dispensing appliance identifies the patient for whom the pharmaceutical is required, the identity of the particular pharmaceutical, and the treatment regimen.